

background may then be changed accordingly throughout the day to, for example, a blue sky or a nighttime view. It also may vary, e.g., by time of day, day of week, month, year or season. The mood background also could change depending on the particular category of programming that the user is watching or to which selected schedule information pertains. The mood background also may be adapted to display scenes that reflect the particular viewing area in which the user is situated, like the Rocky Mountains, or Mr. Rainier, etc. It also may be possible to display standard scenes, such as an ocean or forest scene. Moreover, the audio background also could be adjusted to relate to the particular mood background then being displayed. In addition, different background views may be used for holidays and special events, such as Christmas, Fourth of July, Superbowl Sunday, etc. The purpose of the background views is to help ease the monotony of viewing program listings. The microcontroller 16 could be adapted automatically to coordinate the display of the mood background. The user also could be given the ability to choose from among various mood background displays by adapting the microcontroller to display an appropriate mood option menu that lists the mood background options available to the user and allows the user to select one or more by manipulating the selection cursor. Access to such a mood option menu could be achieved by supplying an appropriate identifier, textual or visual, in an appropriate menu of the system, such as the LOCATOR or SETUP screen.

Additionally, the electronic program guide could be configured to store a unique digital identifier for each program along with its schedule information and later use the identifier—e.g., by transmitting it—to indicate to a recording or storage device, such as a video recorder, that the user wishes to record the program. The program guide could also use the identifier to automatically control operation of the video recorder. The electronic program guide could also be configured to use other stored schedule information for this purpose.

The form and content of a particular computer program to implement the invention disclosed herein will be readily apparent to those skilled in the art of video system programming and graphic display. A flow chart showing the operation logic of the system is shown in FIG. 36. It will also be appreciated by those skilled in the art that there can be departure from the specific embodiment of the invention described herein without departing from the true scope of the claims appended hereto.

We claim:

1. An electronic television programming guide for use in connection with a television receiver for displaying a plurality of television programs from a plurality of program sources on a plurality of user-selectable television channels comprising:
 - user control means for issuing control commands, including channel-control commands;
 - data processing means for receiving said control commands and for generating video control commands;
 - video display generator means adapted to receive video control commands from said data processing means for generating and displaying a visual display of a plurality of television program titles on said television receiver, said plurality of television program titles arranged alphabetically by title; and
 - selection means for allowing said user to select a title for display on said television receiver by selecting the first n characters of said title, where n is greater than one;

said data processing means being responsive to said selection means and adapted to select said plurality of television program titles for display on said television receiver in response to said n characters;

wherein said video display generator means displays said n characters and said selection means comprises means for causing each of said n characters to cycle forward and backward through a plurality of alphanumeric characters and means for assigning one of said alphanumeric characters to each of said n characters.

2. The electronic television programming guide of claim 1 wherein said video display generator means changes said display of television program titles substantially immediately after selection of each of said n characters.

3. The electronic television programming guide of claim 1 wherein said video display generator means displays said n characters concurrently with said plurality of program titles.

4. The electronic television programming guide of claim 1 wherein said video display generator means comprises cursor means for designating one of said displayed titles in further response to said n characters.

5. The electronic television programming guide of claim 4 wherein said user selection means further comprises means for selecting said designated program for viewing.

6. The electronic television programming guide of claim 1 wherein said video display generator means changes said display of television program titles as said selection means cycles through said plurality of alphanumeric characters.

7. The electronic television programming guide of claim 1 wherein said visual display comprises channel, day, and time information for said program titles.

8. The electronic television programming guide of claim 1 wherein said selection means comprises means for causing a cursor to scroll through said displayed titles.

9. The electronic television programming guide of claim 1 wherein said display of television program titles consists of titles for programs scheduled for display on the same channel.

10. The electronic television programming guide of claim 1 wherein said display of television program titles consists of titles for programs scheduled for display on the same day and at the same time.

11. The electronic television programming guide of claim 1 wherein said display of television program titles consists of titles for programs scheduled for display on a plurality of user-defined favorite channels comprising a subset of said plurality of user-selectable television channels.

12. In an electronic television programming guide for use in connection with a television receiver for displaying a plurality of television programs from a plurality of program sources on a plurality of user-selectable television channels comprising, a method for selecting a program for display on said receiver by searching a database of program schedule information alphabetically by title, said method comprising: generating user control commands with a user control means;

selecting and displaying the first n characters of a program title with said user control means, where n is greater than one, wherein each said character is selected from a plurality of alphanumeric characters by cycling forward and/or backward through said alphanumeric characters and assigning one of said alphanumeric characters to each of said n characters;

receiving said user control commands and searching a database of program schedule information in response to said n characters; and

generating and displaying a visual display of television program titles displayed alphabetically by title in response to said searching of said database.

13. The method of claim 12 further comprising changing said visual display of television program titles substantially immediately upon selection of each of said n characters.

14. The method of claim 12 wherein said n characters are displayed concurrently with said visual display of program titles.

15. The method of claim 12 comprising designating one of said displayed titles in further response to said searching of said database.

16. The method of claim 15 further comprising selecting said designated program for viewing.

17. The method of claim 12 wherein said display of television program titles is changed as one of the n characters is changed.

18. The method of claim 12 comprising displaying channel, day, and time information for said program titles.

19. The method of claim 12 further comprising scrolling through said displayed titles using said user control means.

20. The method of claim 12 wherein said display of television program titles consists of titles for programs scheduled for display on the same channel.

21. The method of claim 12 wherein said display of television program titles consists of titles for programs scheduled for display on the same day and at the same time.

22. The method of claim 12 wherein said display of television program titles consists of titles for programs scheduled for display on a plurality of user-defined favorite channels comprising a subset of said plurality of user-selectable television channels.

(23. In an electronic television programming guide for use in connection with a television receiver, a method for selecting program schedule information for display on said receiver by selecting a plurality of characters in a desired title for one of said programs, the method comprising:

- a) providing a user control means including up/down arrow keys;
- b) displaying a plurality of n character display cells on said television receiver, where n is greater than 1;
- c) displaying an alphanumeric character in the first said display cell in response to a first user control command generated by said user control means;
- d) changing said displayed alphanumeric character in response to depression of one of said up/down arrow keys on said user control means if said displayed alphanumeric character is not the correct first character for said desired title;
- e) selecting said displayed alphanumeric character as said first character of said desired title in response to a second user control command;
- f) displaying a plurality of program titles alphabetically in response to said first selected alphanumeric character;
- g) repeating steps c), d), and e) for the second character of said desired title and displaying a plurality of program titles alphabetically in response to said first and second selected alphanumeric characters of said desired title; and
- h) repeating steps c), d), and e) for the third character of said desired title and displaying a plurality of program titles alphabetically in response to said first, second and third selected alphanumeric characters of said desired title if said desired title is not displayed following step g).

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24. An electronic television programming guide for use in connection with a television receiver for displaying a plurality of television programs from a plurality of sources on a plurality of user-selectable television channels comprising:

a wireless remote control that generates control commands;

a data processor that receives the control commands from the wireless remote control; and

a video display generator connected to the data processor that displays an alphabetically-arranged visual display of a plurality of television program titles on said television receiver,

wherein a user may search for a title to be displayed by selecting n characters with the wireless remote control, where n is greater than one, wherein each of the n characters may be selected with the wireless remote control from a plurality of displayed alphanumeric characters.

25. The electronic television programming guide defined in claim 24 wherein each of the n characters may be selected with the wireless remote control by cycling through the displayed alphanumeric characters.

26. The electronic television programming guide defined in claim 24, wherein the video display generator changes the display of television program titles in real time as each of the alphanumeric characters is cycled through with the wireless remote control.

27. The electronic television programming guide defined in claim 24 wherein the video display generator changes the display of television program titles when each of the n characters is selected with the wireless remote control.

28. The electronic television programming guide defined in claim 24, wherein the user selects the n characters from the plurality of alphanumeric characters without using corresponding alphanumeric keys on the wireless remote control.

29. The electronic television programming guide defined in claim 24 wherein the wireless remote control comprises nonalphanumeric keys, wherein the user selects the n characters from the plurality of alphanumeric characters using the nonalphanumeric keys, and wherein the nonalphanumeric keys comprise arrow keys.

30. The electronic television programming guide defined in claim 24, wherein the wireless remote control comprises nonalphanumeric keys, wherein the user selects the n characters from the plurality of alphanumeric characters using the nonalphanumeric keys, and wherein the nonalphanumeric keys comprise arrow keys, and wherein one of the arrow keys is an up arrow key and one of the arrow keys is a down arrow key.

31. The electronic television programming guide defined in claim 24 wherein the video display generator designates one of the displayed television program titles in response to the selection of the n characters.

32. The electronic television programming guide defined in claim 24 wherein the display comprises channel and time information for the television program titles.

33. The electronic television programming guide defined in claim 24 wherein the video display generator highlights a given one of the television program titles as the user scrolls through the television program titles.

34. The electronic television programming guide defined in claim 24 wherein the video display generator highlights a given one of the television program titles as the user scrolls through the television program titles and wherein the highlighted program is selected for viewing using the wireless remote control.

35. The electronic television programming guide defined in claim 24 wherein the display of television programming titles comprises titles for programs scheduled for display on the same channel.

36. The electronic television programming guide defined in claim 24 wherein the display of television programming titles comprises titles for programs scheduled for display on the same day and at the same time.

37. The electronic television programming guide defined in claim 24 wherein the display of television programming titles comprises titles for programs scheduled for display on a plurality of user-

defined favorite channels that comprise a subset of said plurality of user-selectable television channels.

38. The electronic television programming guide defined in claim 24, wherein each of the n characters that is selected with the wireless remote control is a given one of the alphanumeric characters that has first been visually identified on the television receiver.

39. The electronic television programming guide defined in claim 24 wherein the alphanumeric characters are only letters.

50 A1 40. A method for using an electronic television programming guide used in connection with a television receiver that displays a plurality of television programs from a plurality of sources on a plurality of user-selectable television channels, comprising:

generating control commands with a wireless remote control;

receiving the control commands from the wireless remote control with a data processor; and

displaying an alphabetically-arranged visual display of a plurality of television program titles on the television receiver with a video display generator connected to the data processor,

wherein a user may search for a title to be displayed by using the wireless remote control to select n characters from a plurality of displayed alphanumeric characters, where n is greater than or equal to one.

41. The method defined in claim 40 further comprising selecting each of the n characters with the wireless remote control by cycling through the displayed alphanumeric characters.

42. The method defined in claim 40, further comprising changing the display of television program titles with the video display generator in real time as each of the alphanumeric characters is cycled through with the wireless remote control.

43. The method defined in claim 40 further comprising changing the display of television program titles with the video display generator when each of the n characters is selected with the wireless remote control.

44. The method defined in claim 40 further comprising selecting the n characters from the plurality of alphanumeric characters without using corresponding alphanumeric keys on the remote control.

45. The method defined in claim 40 wherein the wireless remote control comprises nonalphanumeric keys, the method further comprising selecting the n characters from the plurality of alphanumeric characters using the nonalphanumeric keys, wherein the nonalphanumeric keys comprise arrow keys.

46. The method defined in claim 40, wherein the wireless remote control comprises nonalphanumeric keys, the method further comprising selecting the n characters from the plurality of alphanumeric characters using the nonalphanumeric keys, wherein the

nonalphanumeric keys comprise arrow keys, and wherein one of the arrow keys is an up arrow key and one of the arrow keys is a down arrow key.

47. The method defined in claim 40 further comprising designating one of the displayed television program titles with the video display generator in response to the selection of the n characters.

48. The method defined in claim 40 wherein the display comprises channel and time information for the television program titles.

49. The method defined in claim 40 further comprising highlighting a given one of the television program titles as the user scrolls through the television program titles.

50. The method defined in claim 40 further comprising highlighting a given one of the television program titles with the video display generator as the user scrolls through the television program titles, wherein the highlighted program is selected for viewing using the wireless remote control.

51. The method defined in claim 40 wherein the display of television programming titles comprises titles for programs scheduled for display on the same channel.

52. The method defined in claim 40 wherein the display of television programming titles comprises titles for programs scheduled for display on the same day and at the same time.

53. The method defined in claim 40 wherein the display of television programming titles comprises titles for programs scheduled for display on a plurality of user-defined favorite channels that comprise a subset of said plurality of user-selectable television channels.

54. The method defined in claim 40 further comprising selecting each of the n characters with the wireless remote control by first visually identifying a given one of the alphanumeric characters on the television receiver.

55. The method defined in claim 40 wherein the alphanumeric characters are only letters.